CLAIMS

1. A method of operating a gas turbine engine having a lubrication sump which vents air through a vent which produces an exit pressure at the exit of the vent, comprising:

a) running the engine at idle; and

b) b) reducing said exit pressure.

2. Method according to claim 1, wherein the reducing of paragraph (b) comprises ducting a compressor discharge bleed to an eductor connected to the vent, to thereby draw air through the vent.

3.Method according to claim 1, and further comprising

c) terminating the reducing of paragraph (b) when flow through the vent exceeds a floor.

4. Method according to claim 1, and further comprising:

c) raising speed of the engine; and

d) terminating the reducing of paragraph (b).

5. Method, comprising:

a) ascertaining amount of airflow across seals which seal a lubrication sump; and

b) b) maintaining said airflow above a predetermined minimum.

6. Method according to claim 5, wherein said airflow is maintained above said minimum by activating an eductor which draws air from the sump.

7. Method according to claim 5, wherein the sump is contained in a gas turbine engine.

8. Method according to claim 5, and further comprising the step of

c) recovering oil scavenged from the sump and delivering the oil recovered to a bearing in a gas turbine engine.

9. Method, comprising:

a) in a gas turbine engine, maintaining an eductor in fluid communication with a vent of a lubrication sump; and

b) using the eductor to maintain fluid flow through the vent above a predetermined minimum.

10. Method according to claim 9, wherein the operation of paragraph (b) occurs at idle speeds.

11. Method according to claim 9, and further comprising:

c) measuring a parameter which makes an indication of air flow which would exist in the vent without the eductor and, if the indication exceeds a floor, de-activating the eductor.

12. Method of operating a gas turbine engine, comprising:

a) maintaining an eductor, having a flow restrictor therein, in fluid communication with a vent of a lubrication sump;

b) when engine speed is below a floor, injecting a jet of air into the eductor, to increase flow through the vent, to decrease pressure in the sump; and

c) when engine speed is above a threshold,

i) terminating the jet of air, and

ii) utilizing the flow restrictor to limit flow through the vent.

13. Apparatus, comprising:

a) a gas turbine engine;

b) a lubrication sump in the engine which vents air to an exit; and

b) first means for increasing flow through the vent above normal during idle operation.

14. Apparatus according to claim 13, and further comprising:

c) second means for de-activating the first means at high-power operation of the engine.

15. Apparatus according to claim 14, and further comprising:

d) means for restricting flow to a level below normal at said high-power operation.

16. Apparatus, comprising:

a) a gas turbine engine;

b) a lubrication sump in the engine having a vent;

c) a pressurization chamber for pressurizing the sump;

d) an eductor in fluid communication with the vent;

e) means for tapping pressurized air from a compressor in the engine and delivering the pressurized air to the eductor;

f) valve means for activating and de-activating delivery of pressurized air to the eductor; and

g) a pressure sensor for ascertaining whether pressure in the pressurization chamber falls below that in the sump by a predetermined amount and, if so, causing the valve means to deliver pressurized air to the eductor, to thereby reduce pressure in the sump.

17. Apparatus according to claim 16, wherein the eductor comprises a flow restrictor, which restricts flow through the vent when the eductor is not activated.

18. A method of operating an oil sump having a vent in a gas turbine aircraft engine, comprising:

a) artificially reducing pressure in the sump during idle operation; and

b) artificially reducing flow through the vent during cruise operation.

19. Apparatus for operating an oil sump having a vent in a gas turbine aircraft engine, comprising:

a) means for artificially reducing pressure in the sump during idle operation; and

b) means for artificially reducing flow through the vent during cruise operation.